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(FILE 'HOME' ENTERED AT 17:05:32 ON 14 OCT 2005)

FILE 'HCAPLUS' ENTERED AT 17:05:38 ON 14 OCT 2005

L1 2 SEA ABB=ON PLU=ON (US2003158101 OR US5990077)/PN OR (US2002-0  
42746# OR US96-632533# OR US95-422540#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 17:07:13 ON 14 OCT 2005

FILE 'HCAPLUS' ENTERED AT 17:07:13 ON 14 OCT 2005

L2 TRA L1 1- RN : 14 TERMS

FILE 'REGISTRY' ENTERED AT 17:07:13 ON 14 OCT 2005

L3 14 SEA ABB=ON PLU=ON L2

FILE 'WPIX' ENTERED AT 17:07:34 ON 14 OCT 2005

L4 5 SEA ABB=ON PLU=ON (US2003158101 OR US5990077)/PN OR (US2002-0  
42746# OR US96-632533# OR US95-422540#)/AP,PRN

=> b hcap

FILE 'HCAPLUS' ENTERED AT 17:08:02 ON 14 OCT 2005

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FILE COVERS 1907 - 14 Oct 2005 VOL 143 ISS 17

FILE LAST UPDATED: 13 Oct 2005 (20051013/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all l1 tot

L1 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:91506 HCAPLUS

DN 134:168296

ED Entered STN: 07 Feb 2001

TI Intestinetrophic glucagon-like peptide-2 analogs

IN Drucker, Daniel J.; Crivici, Anna E.; Sumner-Smith, Martin

PA NPS Allelix Corp., Can.

SO U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 631,273, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K038-26

ICS A61K038-17; C07K014-605

INCL 514012000

CC 63-3 (Pharmaceuticals)

Section cross-reference(s): 2

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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Search done by Noble Jarrell

PI	US 6184201	B1	20010206	US 1997-835538	19970408 <--
	US 5990077	A	19991123	US 1995-422540	19950414 <--
	US 5789379	A	19980804	US 1996-669791	19960628 <--
	US 5834428	A	19981110	US 1996-669790	19960628 <--
	US 2001021767	A1	20010913	US 2001-764070	20010119 <--
	EP 1231219	A1	20020814	EP 2001-129072	20011207
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 2003162703	A1	20030828	US 2002-293941	20021114 <--
	US 2003158101	A1	20030821	US 2002-42746	20021120 <--
PRAI	US 1995-422540	A2	19950414	<--	
	US 1996-631273	B2	19960412		
	US 1996-632533	B2	19960412	<--	
	US 1997-835538	A3	19970408		
	US 2001-764070	A1	20010119		
	EP 1997-916280	A3	20011207		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 6184201	ICM	A61K038-26	
	ICS	A61K038-17; C07K014-605	
	INCL	514012000	
US 6184201	NCL	514/012.000; 424/009.200; 514/002.000; 514/003.000; 530/303.000; 530/308.000; 530/324.000	
	ECLA	C07K014/605	<--
US 5990077	NCL	514/002.000; 514/003.000; 514/012.000; 530/303.000; 530/308.000; 530/324.000	
	ECLA	C07K014/605	<--
US 5789379	NCL	514/012.000; 435/366.000; 435/371.000; 514/002.000; 514/003.000; 530/303.000; 530/308.000; 530/324.000	
	ECLA	C07K014/605	<--
US 5834428	NCL	514/012.000; 435/366.000; 435/371.000; 514/002.000; 514/003.000; 530/303.000; 530/308.000; 530/324.000	
	ECLA	C07K014/605	<--
US 2001021767	NCL	530/320.000	
	ECLA	C07K014/605	<--
EP 1231219	ECLA	C07K014/605	
US 2003162703	NCL	514/012.000	
	ECLA	C07K014/605	<--
US 2003158101	NCL	514/012.000	
	ECLA	C07K014/605	<--

OS MARPAT 134:168296

AB Analogs of glucagon-like peptide 2, a product of glucagon gene expression, have been identified as intestinal tissue growth factors. Their formulation as pharmaceuticals and therapeutic use in treating disorders of the small bowel are described.

ST glucagon like peptide 2 analog intestine therapy sequence

IT Intestine, disease

(Crohn's; intestinotrophic glucagon-like peptide-2 analogs)

IT Drug delivery systems

(carriers; intestinotrophic glucagon-like peptide-2 analogs)

IT Digestive tract

(disease; intestinotrophic glucagon-like peptide-2 analogs)

IT Intestine, disease

(enteritis; intestinotrophic glucagon-like peptide-2 analogs)

IT Digestive tract

(indigestion; intestinotrophic glucagon-like peptide-2 analogs)

IT Intestine, disease

(inflammatory; intestinotrophic glucagon-like peptide-2 analogs)

IT Chemotherapy

(intestinal damage from; intestinotrophic glucagon-like peptide-2 analogs)

IT Antiulcer agents

Celiac disease

Drug delivery systems

Protein sequences

## Ulcer

- (intestinitrophic glucagon-like peptide-2 analogs)
- IT Intestine, disease  
(malabsorption; intestinitrophic glucagon-like peptide-2 analogs)
- IT Intestine, disease  
(short bowel syndrome; intestinitrophic glucagon-like peptide-2 analogs)
- IT Intestine, disease  
(small; intestinitrophic glucagon-like peptide-2 analogs)
- IT Digestive tract  
(sprue; intestinitrophic glucagon-like peptide-2 analogs)
- IT 54249-88-6, Dipeptidyl peptidase IV  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(intestinitrophic glucagon-like peptide-2 analogs)
- IT 89750-15-2D, Glucagon-like peptide 2, analogs  
RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(intestinitrophic glucagon-like peptide-2 analogs)
- IT 223460-79-5, 1-33-Glucagon-like peptide II (human) 325150-06-9  
325150-33-2  
RL: PRP (Properties)  
(unclaimed protein sequence; intestinitrophic glucagon-like peptide-2 analogs)
- IT 81156-22-1  
RL: PRP (Properties)  
(unclaimed sequence; intestinitrophic glucagon-like peptide-2 analogs)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

## RE

- (1) Allen; US 4920016 1990 HCAPLUS
- (2) Anon; EP 0612531 1994 HCAPLUS
- (3) Baumann; US 5009956 1991 HCAPLUS
- (4) Cheeseman; "The effect of gastric inhibitory polypeptide and glucagon like peptides on intestinal basolateral membrane hexose transport", APStracts 3:0071G 1996
- (5) Cullis; US 5008050 1991 HCAPLUS
- (6) Drucker; US 5789379 1998 HCAPLUS
- (7) Drucker; US 5990077 1998 HCAPLUS
- (8) Ehrlich; American Journal of Physiology 1994, PE662 HCAPLUS
- (9) Evans; US 4311712 1982 HCAPLUS
- (10) Evans; US 4370349 1983 HCAPLUS
- (11) George; FEBS Letters 1985, V192(2), P275 HCAPLUS
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- (15) Irwin; Molecular Endocrinology 1995, V9, P267 HCAPLUS
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- (18) Martin; US 4737323 1988
- (19) Mommsen; FEBS Letters 1987, V219(1), P227 HCAPLUS
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- (21) Nishi; Molecular Endocrinology 1990, V4, P1192 HCAPLUS
- (22) Orskov; Diabetologia 1987, V30, P874 MEDLINE
- (23) Orskov; FEBS Letters 1989, V247(2), P193 MEDLINE
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- (25) Ruiz-Grande; Can J Physiology Pharmacology 1990, V68(12), P1568 HCAPLUS
- (26) Shennan; Molecular and Cellular Endocrinology 1989, V67, P93 HCAPLUS
- (27) Suzuki; US 4016100 1977 HCAPLUS
- (28) Uster; US 4944948 1990 HCAPLUS
- (29) Watanabe; Biochemical and Biophysical Research Communications 1988, V152(3), P1038 HCAPLUS

L1 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:756228 HCAPLUS

DN 126:19330

ED Entered STN: 26 Dec 1996

Search done by Noble Jarrell

TI Preparation of glucagon-like peptide-2 analogs as as gastrointestinal  
tissue growth factors  
IN Drucker, Daniel J.  
PA 1149336 Ontario Inc., Can.  
SO PCT Int. Appl., 55 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM C07K014-605  
ICS A61K038-26  
CC 34-3 (Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 1  
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9632414	A1	19961017	WO 1996-CA232	19960412 <--
	W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI			
	RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML			
	US 5990077	A	19991123	US 1995-422540	19950414 <--
	CA 2218225	AA	19961017	CA 1996-2218225	19960412 <--
	AU 9652658	A1	19961030	AU 1996-52658	19960412 <--
	AU 720493	B2	20000601		
	EP 830377	A1	19980325	EP 1996-908973	19960412 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	CN 1188485	A	19980722	CN 1996-194693	19960412 <--
	JP 11505521	T2	19990521	JP 1996-530606	19960412 <--
	AU 753771	B2	20021031	AU 2001-65566	20010830 <--
PRAI	US 1995-422540	A	19950414	<--	
	WO 1996-CA232	W	19960412		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9632414	ICM	C07K014-605
	ICS	A61K038-26
WO 9632414	ECLA	C07K014/605
US 5990077	NCL	514/002.000; 514/003.000; 514/012.000; 530/303.000; 530/308.000; 530/324.000
	ECLA	C07K014/605

OS MARPAT 126:19330

AB Glucagon-like peptide-2, a product of glucagon gene expression, and analogs of glucagon-like peptide-2, have been identified as gastrointestinal tissue growth factors. Their effects on the growth of small bowel and pancreatic islets are described. Their formulation as a pharmaceutical, and their therapeutic use in treating disorders of the bowel, are described. Thus, rat glucagon-like peptide-2, prepared by standard solid-phase methods using Boc chemical on a 4-methylbenzhydrylamine (MBHA) resin, administered for 10 days, stimulated villus elongation in CD1 mice small bowel. Proliferation rates in the proximal jejunum of the treated mice were increased 124% over control mice.

ST glucagon like peptide prepn gastrointestinotrophic; small bowel growth  
glucagon like peptide; pancreatic islet growth glucagon like peptide

IT Digestive tract  
(disease; preparation of glucagon-like peptide-2 analogs as as  
gastrointestinal tissue growth factors)

IT Pancreatic islet of Langerhans  
(preparation of glucagon-like peptide-2 analogs as as gastrointestinal  
tissue growth factors)

IT Intestine  
(small; preparation of glucagon-like peptide-2 analogs as as  
gastrointestinal tissue growth factors)

IT 89750-15-2P, Glucagon-related peptide-II

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(degu; preparation of glucagon-like peptide-2 analogs as as gastrointestinal tissue growth factors)

IT 93927-39-0P, Glucagon-related peptide II (rat) 99120-49-7P,  
Glucagon-like peptide II (human) 107444-51-9P 184378-22-1P  
184378-24-3P 184378-25-4P 184378-26-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of glucagon-like peptide-2 analogs as as gastrointestinal tissue growth factors)

IT 71567-77-6, Glicentin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(rat; preparation of glucagon-like peptide-2 analogs as as gastrointestinal tissue growth factors)

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STRUCTURE FILE UPDATES: 12 OCT 2005 HIGHEST RN 865114-63-2

DICTIONARY FILE UPDATES: 12 OCT 2005 HIGHEST RN 865114-63-2

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\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

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<http://www.cas.org/ONLINE/UG/regprops.html>

L3 ANSWER 1 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 325150-33-2 REGISTRY

CN 3: PN: US6184201 SEQID: 3 unclaimed protein (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 5

Search done by Noble Jarrell

NTE

type	location	description
uncommon	Aaa-2	-

PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	US6184201
	unclaimed
	SEQID 3

SEQ 1 EXNTI

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PRP (Properties)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 325150-06-9 REGISTRY

CN 1: PN: US6184201 SEQID: 1 unclaimed protein (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 37

NTE

type	location	description
uncommon	Aaa-1	-
uncommon	Aaa-2	-
uncommon	Aaa-3	-
uncommon	Aaa-4	-
uncommon	Aaa-5	-
uncommon	Aaa-6	-
uncommon	Aaa-11	-
uncommon	Aaa-12	-
uncommon	Aaa-13	-
uncommon	Aaa-14	-
uncommon	Aaa-15	-
uncommon	Aaa-21	-
uncommon	Aaa-22	-
uncommon	Aaa-25	-
uncommon	Aaa-26	-
uncommon	Aaa-33	-
uncommon	Aaa-34	-
uncommon	Aaa-35	-
uncommon	Aaa-36	-
uncommon	Aaa-37	-

PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	US6184201
	unclaimed
	SEQID 1

SEQ 1 XXXXXXSFSD XXXXXLDNLA XXDFXXWLIQ TKXXXXX  
 MF Unspecified  
 CI MAN  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL  
 DT.CA Caplus document type: Patent  
 RL.P Roles from patents: PRP (Properties)  
     1 REFERENCES IN FILE CA (1907 TO DATE)  
     1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 223460-79-5 REGISTRY  
 CN 1-33-Glucagon-like peptide II (human) (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 1: PN: US6297214 SEQID: 1 claimed protein  
 CN 1: PN: WO2004035624 FIGURE: 1 claimed protein  
 CN 2: PN: US6184201 SEQID: 2 unclaimed protein  
 CN 2: PN: WO2005019262 SEQID: 2 claimed protein  
 CN 6: PN: WO2005019262 SEQID: 2 claimed protein  
 CN Glucagon-like peptide II (human)  
 CN Human glucagon-like peptide-2  
 FS PROTEIN SEQUENCE  
 SQL 33

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	US6184201
	unclaimed
	SEQID 2
	US6297214
	claimed
	SEQID 1

SEQ 1 HADGSFSDEM NTILDNLAAR DFINWLIQTK ITD

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

MF C165 H254 N44 O55 S  
 CI MAN  
 SR CA  
 LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL  
 DT.CA Caplus document type: Journal; Patent  
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)  
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)  
     17 REFERENCES IN FILE CA (1907 TO DATE)  
     2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
     17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 184378-26-5 REGISTRY  
 CN L-Aspartic acid, L-arginyl-L-arginyl-L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-asparaginy-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-asparaginy-L-leucyl-L-alanyl-L-threonyl-L-arginyl-L- $\alpha$ -aspartyl-L-phenylalanyl-L-isoleucyl-L-asparaginy-L-tryptophyl-L-leucyl-L-isoleucyl-L-glutaminy-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl-

(9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE  
SQL 35

SEQ 1 RRHADGSFSD EMMTILDNLA TRDFINWLIQ TKITD  
MF C178 H280 N52 O58 S  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA CAplus document type: Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 5 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 184378-25-4 REGISTRY  
CN L-Aspartic acid, L-arginyl-L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-asparaginyl-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-asparaginyl-L-leucyl-L-alanyl-L-threonyl-L-arginyl-L- $\alpha$ -aspartyl-L-phenylalanyl-L-isoleucyl-L-asparaginyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-glutamyl-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl- (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE  
SQL 34

SEQ 1 RHADGSFSDE MNTILDNLAT RDFINWLIQT KITD  
MF C172 H268 N48 O57 S  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA CAplus document type: Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 6 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 184378-24-3 REGISTRY  
CN L-Aspartic acid, N-acetyl-L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-asparaginyl-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-asparaginyl-L-leucyl-L-alanyl-L-threonyl-L-arginyl-L- $\alpha$ -aspartyl-L-phenylalanyl-L-isoleucyl-L-asparaginyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-glutamyl-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl- (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE  
SQL 33  
NTE modified

type	location	description
terminal mod.	His-1	N-acetyl

SEQ 1 HADGSFSDEM NTILDNLATR DFINWLIQTK ITD

\*\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 197923-52-7, 223460-86-4  
MF C168 H258 N44 O57 S  
CI MAN  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA CAplus document type: Journal; Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES



(Uses)

RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties)  
 3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 7 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 184378-22-1 REGISTRY

CN L- $\alpha$ -Asparagine, L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-asparaginyl-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-asparaginyl-L-leucyl-L-alanyl-L-threonyl-L-arginyl-L- $\alpha$ -aspartyl-L-phenylalanyl-L-isoleucyl-L-asparaginyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-glutamyl-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl- (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE

SQL 33

NTE modified

type	location	description
terminal mod.	Asp-33	C-terminal amide

SEQ 1 HADGSFSDEM NTILDNLATR DFINWLIQTK ITD

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 197923-54-9

MF C166 H257 N45 O55 S

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 8 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 107444-51-9 REGISTRY

CN L-Argininamide, L-histidyl-L-alanyl-L- $\alpha$ -glutamylglycyl-L-threonyl-L-phenylalanyl-L-threonyl-L-seryl-L- $\alpha$ -aspartyl-L-valyl-L-seryl-L-seryl-L-tyrosyl-L-leucyl-L- $\alpha$ -glutamylglycyl-L-glutamyl-L-alanyl-L-alanyl-L-lysyl-L- $\alpha$ -glutamyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-tryptophyl-L-leucyl-L-valyl-L-lysylglycyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Glucagon-related peptide 1 (Rana catesbeiana), 3-L-glutamic acid-10-L-valine-16-glycine-17-L-glutamine-23-L-isoleucine-24-L-alanine-27-L-valine-30-L-argininamide-31-de-L-proline-32-de-L-lysine-

OTHER NAMES:

CN (7-36)Glucagon-like peptide-1 amide

CN (7-36)Glucagon-like peptide-1 amide (human)

CN 13: PN: WO0041546 FIGURE: 3 claimed protein

CN 20: PN: WO2004069314 PAGE: 21 claimed protein

CN 36: PN: WO0155213 SEQID: 36 claimed sequence

CN 6: PN: WO2004005342 PAGE: 46 claimed protein

CN 7-36-Human glucagon-like peptide I amide

CN 774: PN: WO2004074315 SEQID: 775 claimed protein

CN Glucagon-like peptide-I(7-36) amide

CN Human GLP-1-(7-36)-amide

CN Human glucagon-like peptide-1-(7-36) amide

CN Insulinotropin

CN Insulinotropin (human)

CN Rat GLP-I(7-36)amide

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 30

NTE modified

type	location	description
terminal mod.	Arg-30	- C-terminal amide

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	WO2000041546 claimed FIGURE 3
	WO2001055213 claimed SEQID 36

SEQ 1 HAEGTFTSDV SSYLEGQAAK EFIAWLVKGR

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 113789-12-1

MF C149 H226 N40 O45

CI COM

SR CA

LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CBNB, CEN, CHEMCATS, CIN, CSCHEM, EMBASE, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL

DT.CA CAplus document type: Conference; Journal; Patent

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

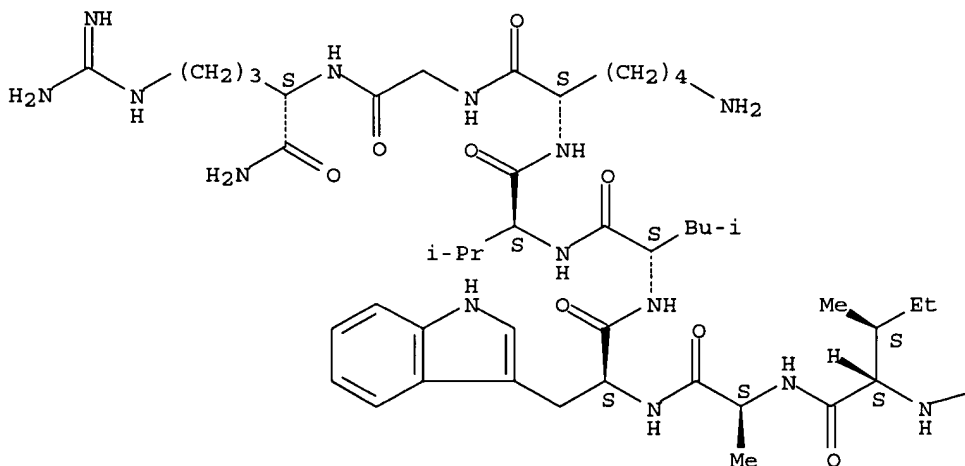
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RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

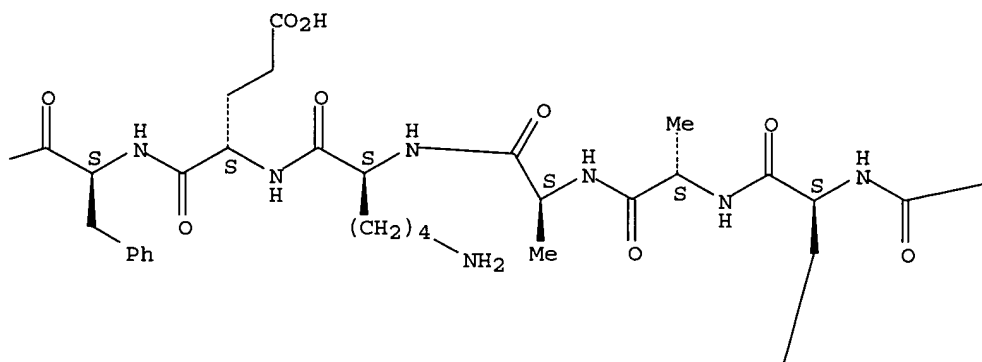
Absolute stereochemistry.

PAGE 1-A

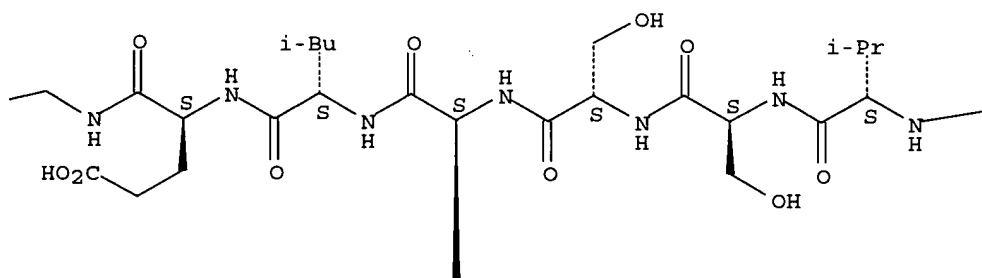


Search done by Noble Jarrell

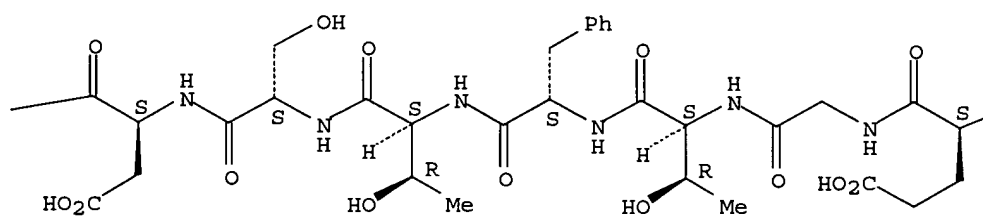
PAGE 1-B



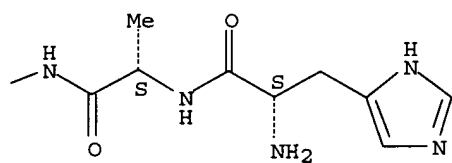
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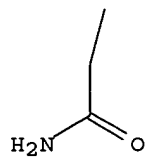
PAGE 1-D



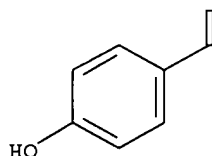
PAGE 1-E



PAGE 2-B



PAGE 2-C



215 REFERENCES IN FILE CA (1907 TO DATE)  
 20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 215 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 9 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 99120-49-7 REGISTRY  
 CN Glucagon-like peptide II (human) (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Glucagon-related peptide II (human)  
 OTHER NAMES:  
 CN 167: PN: WO0069900 SEQID: 346 unclaimed protein  
 CN L-Arginine, L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-asparaginyl-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-asparaginyl-L-leucyl-L-alanyl-L-alanyl-L-arginyl-L- $\alpha$ -aspartyl-L-phenylalanyl-L-isoleucyl-L-asparaginyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl-L- $\alpha$ -aspartyl-  
 FS PROTEIN SEQUENCE  
 SQL 34

## PATENT ANNOTATIONS (PNTE):

Sequence	Patent
Source	Reference
Not Given	WO2000069900
	unclaimed
	SEQID 346

SEQ 1 HADGSFSDEM NTILDNLAAR DFINWLIQTK ITDR

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

DR 123625-66-1, 104269-51-4  
 MF C171 H266 N48 O56 S  
 CI MAN  
 SR CA  
 LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, TOXCENTER, USPATFULL  
 DT.CA Caplus document type: Journal; Patent  
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)  
 RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties)

29 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 29 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 10 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 93927-39-0 REGISTRY  
 CN Glucagon-like peptide II (rat) (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Glucagon-related peptide II (rat)  
 OTHER NAMES:  
 CN L-Lysine, L-histidyl-L-alanyl-L- $\alpha$ -aspartylglycyl-L-seryl-L-phenylalanyl-L-seryl-L- $\alpha$ -aspartyl-L- $\alpha$ -glutamyl-L-methionyl-L-

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asparaginyl-L-threonyl-L-isoleucyl-L-leucyl-L- $\alpha$ -aspartyl-L-  
asparaginyl-L-leucyl-L-alanyl-L-threonyl-L-arginyl-L- $\alpha$ -aspartyl-L-  
phenylalanyl-L-isoleucyl-L-asparaginyl-L-tryptophyl-L-leucyl-L-isoleucyl-L-  
glutaminy-L-threonyl-L-lysyl-L-isoleucyl-L-threonyl-L- $\alpha$ -aspartyl-L-  
lysyl-

FS PROTEIN SEQUENCE  
SQL 35

SEQ 1 HADGSFSDEM NTILDNLATR DFINWLIQTK ITDKK  
MF C178 H280 N48 O58 S  
CI MAN  
LC STN Files: CA, CAPLUS, USPATFULL  
DT.CA Caplus document type: Journal; Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
RL.NP Roles from non-patents: BIOL (Biological study); FORM (Formation,  
nonpreparative); PROC (Process); PRP (Properties)  
5 REFERENCES IN FILE CA (1907 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 11 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 89750-15-2 REGISTRY  
CN Glucagon-like peptide II (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Glucagon-related peptide II  
OTHER NAMES:  
CN Glucagon-like peptide 2  
MF Unspecified  
CI MAN  
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS,  
CHEMCATS, CIN, IPA, MRCK\*, PROMT, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
DT.CA Caplus document type: Conference; Dissertation; Journal; Patent  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses)  
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(Preparation); PROC (Process); PRP (Properties); USES (Uses)  
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
study); PROC (Process); PRP (Properties)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

333 REFERENCES IN FILE CA (1907 TO DATE)  
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
333 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 12 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 81156-22-1 REGISTRY  
CN L-Tyrosine, L-tyrosyl-L-seryl-L-lysyl- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN L-Tyrosine, N-[N2-(N-L-tyrosyl-L-seryl)-L-lysyl]-  
OTHER NAMES:  
CN 19: PN: US20040052862 SEQID: 8 unclaimed sequence  
CN 4: PN: US6184201 SEQID: 4 unclaimed sequence  
FS PROTEIN SEQUENCE; STEREOSEARCH  
SQL 4

PATENT ANNOTATIONS (PNTE):  
Sequence | Patent

Source	Reference
Not Given	US6184201 unclaimed SEQID 5

SEQ 1 YSKY

## \*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

MF C27 H37 N5 O8

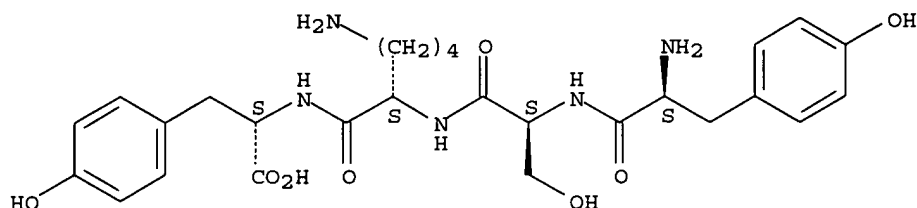
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA Caplus document type: Conference; Journal; Patent

RL.P Roles from patents: PRP (Properties)

RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties)

Absolute stereochemistry.



5 REFERENCES IN FILE CA (1907 TO DATE)

5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 13 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 71567-77-6 REGISTRY

CN Glicentin (9CI) (CA INDEX NAME)

MF Unspecified

CI MAN

LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, DDFU, DRUGU, EMBASE, MEDLINE, PHAR, PROMT, TOXCENTER, USPATFULL

DT.CA Caplus document type: Conference; Journal; Patent

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); PREP (Preparation); PRP (Properties); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

## \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

169 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

169 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 14 OF 14 REGISTRY COPYRIGHT 2005 ACS on STN

RN 54249-88-6 REGISTRY

CN Peptidase, dipeptidyl, IV (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1F7 antigens

CN Adenosine deaminase-binding proteins

CN Amino acyl-prolyl dipeptidyl aminopeptidase

CN Aminopeptidase, dipeptidyl, IV

CN Aminopeptidase, glycylproline

CN Aminopeptidase, post-proline dipeptidyl

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CN Antigens, CD26  
 CN Casomorphinase  
 CN CD26 (antigen)  
 CN CD26 antigen  
 CN Dipeptidase-IV  
 CN Dipeptidyl peptidase 8  
 CN Dipeptidyl peptidase DP4  
 CN Dipeptidyl peptidase IV  
 CN Dipeptidyl peptidase-4  
 CN Dipeptidyl-aminopeptidase IV  
 CN Dipeptidyl-peptidase IV- $\beta$   
 CN DPP IV  
 CN E.C. 3.4.14.11  
 CN E.C. 3.4.14.5  
 CN EC 3.4.14.5  
 CN Gly-Pro naphthylamidase  
 CN Glycylproline aminopeptidase  
 CN Glycylproline-dipeptidyl-aminopeptidase  
 CN Glycylprolyl aminopeptidase  
 CN Glycylprolyl dipeptidylaminopeptidase  
 CN Post-proline dipeptidyl aminopeptidase  
 CN Post-proline dipeptidyl aminopeptidase IV  
 CN Prolyl dipeptidyl peptidase IV  
 CN X-Pro dipeptidyl peptidase  
 CN X-Prolyl dipeptidyl aminopeptidase  
 CN X-Prolyl dipeptidyl peptidase  
 CN X-Prolyl-dipeptidyl aminopeptidase  
 CN Xaa-Pro-dipeptidylaminopeptidase  
 DR 60241-40-9, 67339-10-0  
 MF Unspecified  
 CI COM, MAN  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,  
 CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CIN, CSCHEM, EMBASE, IPA, PROMT,  
 TOXCENTER, USPAT2, USPATFULL  
 DT.CA Caplus document type: Conference; Dissertation; Journal; Patent  
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
 FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
 study); BIOL (Biological study); PREP (Preparation); PRP (Properties);  
 USES (Uses)  
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
 study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
 study); PREP (Preparation); PROC (Process); PRP (Properties)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2311 REFERENCES IN FILE CA (1907 TO DATE)  
 12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2317 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> b wpix;d all 14 tot

FILE 'WPIX' ENTERED AT 17:08:25 ON 14 OCT 2005  
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FILE LAST UPDATED: 14 OCT 2005 <20051014/UP>  
 MOST RECENT DERWENT UPDATE: 200566 <200566/DW>  
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

Search done by Noble Jarrell



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PLEASE VISIT:  
[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://thomsonderwent.com/coverage/latestupdates/> <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER  
GUIDES, PLEASE VISIT:  
<http://thomsonderwent.com/support/userguides/> <<<

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DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX  
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FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.  
PLEASE CHECK:  
<http://thomsonderwent.com/support/dwpioref/reftools/classification/code-revision/>  
FOR DETAILS. <<<  
'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

L4 ANSWER 1 OF 5 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
AN 2004-096715 [10] WPIX  
CR 1996-477073 [47]; 1997-526401 [48]; 2001-217796 [22]; 2001-595776 [67];  
2003-787348 [74]  
DNC C2004-039903  
TI New Glucagon-like peptide 2 analog with intestino-trophic activity, useful  
for preparing a composition for treating gastrointestinal disease, e.g.  
ulcers, malabsorption, short-gut syndrome and inflammatory bowel disease.  
DC B04  
IN CRIVICI, A E; DRUCKER, D J; SUMNER SMITH, M  
PA (ALLX) NPS ALLELIX CORP  
CYC 1  
PI US 2003162703 A1 20030828 (200410)\* 14 A61K038-28  
ADT US 2003162703 A1 CIP of US 1995-422540 19950414, CIP of US  
1996-631273 19960412, CIP of US 1996-632533 19960412, Div ex US  
1997-835538 19970408, Cont of US 2001-764070 20010119, US 2002-293941  
20021114  
FDT US 2003162703 A1 CIP of US 5990077, Div ex US 6184201  
PRAI US 1997-835538 19970408; US 1995-422540  
19950414; US 1996-631273 19960412; US  
1996-632533 19960412; US 2001-764070  
20010119; US 2002-293941 20021114  
IC ICM A61K038-28  
ICS A61K038-00; A61K038-26; A61K049-00; C07K005-00; C07K007-00;  
C07K016-00; C07K017-00  
AB US2003162703 A UPAB: 20040210  
NOVELTY - A Glucagon-like peptide 2 (GLP-2) analog that has  
intestino-trophic activity and comprising formula (I), is new.  
DETAILED DESCRIPTION - A Glucagon-like peptide 2 (GLP-2) analog that  
has intestino-trophic activity and comprising formula (I), is new.  
R1- (Y1)m-X1-X2-X3-X4-Ser5-Phe6-Ser7-Asp8- (P1)-Leu14-Asp15-Asn16-Leu17-  
Ala18-X19-X20-Asp21-Phe22- (P2)-Trp25-Leu26-Ile27- Gln28-Thr29-Lys30- (P3)-  
(Y2)n-R2 (I)  
X1 = His or Tyr;  
X2 = Ala or Ala-replacement amino acid conferring on the analog  
resistance to DPP-IV enzyme;  
X3 = Pro, Hpro, Asp or Glu;  
X4 = Gly or Ala;  
P1 = Glu-X10-Asn-Thr-Ile or Tyr-Ser-Lys-Tyr;  
X10 = Met or an oxidatively stable Met-replacement amino acid;  
X19 = Ala or Thr;  
X20 = Arg, Lys, His or Ala;

P2 = Ile-Asn, Ile-Ala or Val-Gln;  
 P3 = covalent bond, or is Ile, Ile-Thr or Ile-Thr-Asn;  
 R1 = H or an N-terminal blocking group;  
 R2 = OH or a C-terminal blocking group;  
 Y1 or Y2 = one or two basic amino acids comprising Arg, Lys or His;

and

m and n = independently, are 0 or 1.

At least one of X1, X2, X3, X4, P1, X10, X19, X20, P2 or P3 is other than a wild type, mammalian GLP-2 residue.

INDEPENDENT CLAIMS are also included for the following:

- (1) a pharmaceutical composition comprising GLP-2 analog and a carrier;
- (2) a method for promoting growth of small bowel tissue in a patient;
- (3) a method for treating gastrointestinal disease; and
- (4) a method of identifying intestino-trophic analogs of GLP-2.

ACTIVITY - Gastrointestinal; Antiinflammatory.

No biological data given.

MECHANISM OF ACTION - Gene therapy.

USE - The GLP-2 analog is useful for preparing a composition for treating gastrointestinal disease, e.g., ulcer, malabsorption, short-gut syndrome or cul-de-sac syndrome, inflammatory bowel disease, celiac or tropical sprue, regional enteritis or small intestine damage due to toxic or chemotherapeutic agents (claimed).

Dwg.0/0

FS

CPI

FA

AB; DCN

MC

CPI: B04-C01F; B04-C01G; B11-C08E2; B12-K04E; B14-E08; B14-E10; B14-E10C; B14-S03

L4

ANSWER 2 OF 5 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN

2003-787348 [74] WPIX

CR

1996-477073 [47]; 1997-526401 [48]; 2001-217796 [22]; 2001-595776 [67]; 2004-096715 [10]

DNC

C2003-217277

TI

New pharmaceutical composition comprising a Glucagon-like peptide 2 (GLP-2) peptide comprising vertebrate GLP-2 or its intestinotrophic analog, useful for treating gastrointestinal disease, e.g., ulcers.

DC

B04

IN

DRUCKER, D J

PA

(ONEO-N) 1149336 ONTARIO INC

CYC

1

PI

US 2003158101 A1 20030821 (200374)\* 25 A61K038-22 <--

ADT

US 2003158101 A1 CIP of US 1995-422540 19950414, Cont of US 1996-632533 19960412, US 2002-42746 20021120

FDT

US 2003158101 A1 CIP of US 5990077

PRAI

US 1996-632533 19960412; US 1995-422540 19950414; US 2002-42746 20021120

IC

ICM A61K038-22

AB

US2003158101 A UPAB: 20040210

NOVELTY - A new pharmaceutical composition comprises a Glucagon-like peptide 2 (GLP-2) peptide comprising vertebrate GLP-2 or its intestinotrophic analog that differs from a vertebrate GLP-2 in that it incorporates at least one amino acid addition, deletion, substitution or an amino acid with an N- or C-terminal amino acid blocking group and a carrier.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) a method for promoting growth of bowel tissue in a patient;
- (2) a method for promoting growth of pancreatic islets in a patient;
- (3) an acid addition salt of a GLP-2 peptide;
- (4) a method for identifying novel intestinotrophic peptides; and
- (5) a method for treating a gastrointestinal disease.

ACTIVITY - Gastrointestinal; Antiinflammatory. No biological data given.

MECHANISM OF ACTION - Gene therapy.

USE - The pharmaceutical composition is useful for treating

gastrointestinal disease comprising ulcers, digestion disorders, malabsorption syndromes, short-gut syndrome, cul-de-sac syndrome, inflammatory bowel disease, celiac sprue, tropical sprue, enteritis, Crohn's disease or short bowel syndrome (claimed).

Dwg.0/9

FS CPI

FA AB; DCN

MC CPI: B04-C01G; B04-N04A; B11-C08E2; B14-C03; B14-E08; B14-E10C

L4 ANSWER 3 OF 5 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-595776 [67] WPIX

CR 1996-477073 [47]; 1997-526401 [48]; 2001-217796 [22]; 2003-787348 [74]; 2004-096715 [10]

DNC C2001-176363

TI Glucagon related peptides useful in the treatment of gastrointestinal diseases e.g. inflammatory bowel disease.

DC B04

IN CRIVICI, A E; DRUCKER, D J; SUMNER-SMITH, M

PA (CRIV-I) CRIVICI A E; (DRUC-I) DRUCKER D J; (SUMN-I) SUMNER-SMITH M

CYC 1

PI US 2001021767 A1 20010913 (200167)\* 14 A61K038-18

ADT US 2001021767 A1 CIP of US 1995-422540 19950414, CIP of US 1996-631273 19960412, CIP of US 1996-632533 19960412, Div ex US 1997-835538 19970408, US 2001-764070 20010119

FDT US 2001021767 A1 CIP of US 5990077, Div ex US 6184201

PRAI US 1997-835538 19970408; US 1995-422540

19950414; US 1996-631273 19960412; US

1996-632533 19960412; US 2001-764070

20010119

IC ICM A61K038-18

AB US2001021767 A UPAB: 20040210

NOVELTY - Glucagon-related peptide analogs (I) with intestinotrophic activity are new.

DETAILED DESCRIPTION - Glucagon-related peptide (GLP-2) analogs of formula R1-(Y1)m-X1-X2-X3-X4-Ser5-Phe6-Ser7-Asp8-(P1)-Leu14-Asp15-Asn16-Leu17-Ala18-X19-X20-Asp21-Phe22-(P2)-Trp25-Leu26-Ile27-Gln28-Thr29-Lys30-(P3)-(Y2)n-R2 (I) are new.

X1 = His or Tyr;

X2 = Ala or Ala-replacement amino acid conferring on the analog resistance to Dipeptidyl peptidase (DPP-IV) enzyme;

X3 = Pro, HPro, Asp or Glu;

X4 = Gly or Ala;

P1 = Glu-X10-Asn-Thr-Ile or Tyr-Ser-Lys-Tyr;

X10 = Met or an oxidatively stable Met-replacement amino acid;

X19 = Ala or Thr;

X20 = Arg, Lys, His or Ala;

P2 = Ile-Asn, Ile-Ala or Val-Gln;

P3 = covalent bond, Ile, Ile-Thr or Ile-Thr-Asn;

R1 = H or N-terminal blocking group;

R2 = OH or C-terminal blocking group;

Y1, Y2 = 1 or 2 basic amino acids selected from Arg, Lys or His;

m, n = 0 or 1.

At least one of X1 - X4, P1, X10, X19, X20, P2 or P3 is other than a wild type, mammalian GLP-2 residue.

INDEPENDENT CLAIMS are also included for the following:

(A) a pharmaceutical composition comprising (I) and a carrier for promoting growth of small bowel tissue; and

(B) identifying intestinotrophic analogs of GLP-2 which involves:

(B1) obtaining (I)

(B2) treating a mammal (preferably rat) with a single regimen of (I), capable of eliciting an intestinotrophic effect; and

(B3) determining the effect of the analog on small bowel weight relative to a mock treated control mammal. The intestinotrophic analog of GLP-2 is identified as an analog which elicits an increase in the weight.

ACTIVITY - Antiulcer; Antiinflammatory.

MECHANISM OF ACTION - Dipeptidyl peptidase IV (DPP-IV) resistor.

A solution of human placental DPP-IV (2.5 mu l) containing enzyme (0.125 milliunits) in glycerol (50%), Tris (10 mM), EDTA (pH 7.8) and NaN<sub>3</sub> (0.02%) was added to (Gly2)rGLP-2 analog (50 mu l), (D-Ala2)rGLP-2 analog (50 mu l) and a control peptide rGLP-2 (50 mu l) at a concentration of 0.2 mg/ml in phosphate buffered saline (PBS) at a pH of 7.4. The mixture was incubated at 37 deg. C for 24 hours. The incubation was quenched by the addition of a solution of diprotein A (50 mu l) in PBS. Each sample was analyzed by reverse phase HPLC. After 24 hours incubation, 22% of the control peptide was cleaved by DPP-IV. No cleavage products were detected for the peptides (Gly2)rGLP-2 and (D-Ala2)rGLP-2.

USE - In the treatment of gastrointestinal disease particularly ulcer, digestion disorder, malabsorption syndrome, short-gut syndrome, cul-de-sac syndrome, inflammatory bowel disease, celiac sprue, tropical sprue, hypogammaglobulinemic sprue, enteritis, regional enteritis (Crohn's disease), small intestinal damage due to toxic or other chemotherapeutic agent, and short bowel syndrome (all claimed).

ADVANTAGE - The peptides show an increase in small bowel weight and promote growth of tissue of the small bowel.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B04-C01F; B04-C01G; B04-N04A; B11-C08E; B12-K04A; B14-E02; B14-E08; B14-E09; B14-E10C

L4 ANSWER 4 OF 5 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-217796 [22] WPIX

CR 1996-477073 [47]; 1997-526401 [48]; 2001-595776 [67]; 2003-787348 [74]; 2004-096715 [10]

DNC C2001-064901

TI Novel glucagon-like peptide 2 analog useful for promoting growth of small bowel tissue and for treating gastrointestinal disease such as ulcers, digestion disorders, malabsorption syndromes and cul-de-sac syndrome.

DC B04

IN CRIVICI, A E; DRUCKER, D J; SUMNER-SMITH, M

PA (ALLX) NPS ALLELIX CORP

CYC 1

PI US 6184201 B1 20010206 (200122)\* 16 A61K038-26

ADT US 6184201 B1 CIP of US 1995-422540 19950414, CIP of US 1996-631273 19960412, CIP of US 1996-632533 19960412, US 1997-835538 19970408

FDT US 6184201 B1 CIP of US 5990077

PRAI US 1997-835538 19970408; US 1995-422540 19950414; US 1996-631273 19960412; US 1996-632533 19960412

IC ICM A61K038-26

ICS A61K038-17; C07K014-605

AB US 6184201 B UPAB: 20040210

NOVELTY - A glucagon-like peptide 2 (GLP-2) analog (I) or its salt, which has intestinotrophic activity, is new.

DETAILED DESCRIPTION - (I) has a formula (F) of R<sub>1</sub>-(Y<sub>1</sub>)<sub>m</sub>-X<sub>1</sub>-X<sub>2</sub>-X<sub>3</sub>-X<sub>4</sub>-Ser<sub>5</sub>-Phe<sub>6</sub>-Ser<sub>7</sub>-Asp<sub>8</sub>-(P<sub>1</sub>)-Leu<sub>14</sub>-Asp<sub>15</sub>-Asn<sub>16</sub>-Leu<sub>17</sub>-Ala<sub>18</sub>-X<sub>19</sub>-X<sub>20</sub>-Asp<sub>21</sub>-Phe<sub>22</sub>-(P<sub>2</sub>)-Trp<sub>25</sub>-Leu<sub>26</sub>-Ile<sub>27</sub>-Gln<sub>28</sub>-Thr<sub>29</sub>-Lys<sub>30</sub>-(P<sub>3</sub>)-(Y<sub>2</sub>)<sub>n</sub>-R<sub>2</sub>, where X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub>, P<sub>1</sub>, X<sub>10</sub>, X<sub>19</sub>, X<sub>20</sub>, P<sub>2</sub>, P<sub>3</sub>, R<sub>1</sub>, R<sub>2</sub>, Y<sub>1</sub>, Y<sub>2</sub>, m and n are as defined in DEFINITIONS - Full Definitions: field.

INDEPENDENT CLAIMS are included for:

(1) a pharmaceutical composition (II) comprising (I) or its salt; and  
(2) the identification of intestinotrophic analogs of GLP-2, comprising:

(i) obtaining a GLP-2 analog;  
(ii) administration of the analog to a mammal via a regimen which elicits an intestinotrophic when utilized for rat GLP-2; and  
(iii) determining the effect of the analog on the small bowel weight relative to a mock treated control mammal, whereby an intestinotrophic analog of GLP-2 elicits an increase in small bowel weight.

ACTIVITY - Antiulcer; antiinflammatory. CD1 mice were injected subcutaneously, twice a day with 2.5 mu g of glucagon-like peptide 2

(GLP-2) analog in a total volume of 0.5 cc of phosphate buffered saline (PBS). Animals were sacrificed 10 or 14 days after injection and were fasted at least 20 hours before sacrifice. The mice were anesthetized and exsanguinated by cardiac puncture. Blood was collected, centrifuged and the plasma was stored. The small bowel was removed from the peritoneal cavity, from pylorus to cecum, cleaned weighed and measured. Each small bowel fragment was opened longitudinally on its antimesenteric border in a tissue block and then placed on 10% formalin. Percentage change in small bowel weight was calculated by dividing the mean change in bowel weight of analog treated mice, relative to mice treated with vehicle only, by the mean bowel weight of mice treated with vehicle only and multiplying this figure by 100. The results showed that analogs of GLP-2 molecules have enhanced intestinotrophic activity.

MECHANISM OF ACTION - Analog of GLP-2 (claimed).

USE - (I) and (II) are useful for promoting the growth of small bowel tissue in a patient, to treat gastrointestinal disease such as ulcers, digestion disorders, malabsorption syndromes, short-gut syndrome, cul-de-sac syndrome, inflammatory bowel disease, celiac sprue, tropical sprue, hypo gamma globulinemic sprue, enteritis, regional enteritis (Crohn's disease), small intestinal damage due to toxic or chemotherapeutic agents, and short bowel syndrome, and to reduce a pathological effect or symptom of the gastrointestinal disease. (I) is useful for identifying intestinotrophic analogs of GLP-2 by obtaining (I), administering (I) to a mammal using a regimen capable of eliciting an intestinotrophic effect when utilized for rat GLP-2 and determining the effect of (I) on small bowel weight relative to a mock treated control animal, where (I) is identified as an analog which elicits an increase in the weight (claimed).

Dwg.0/0

FS

CPI

FA

AB; DCN

MC

CPI: B04-C01G; B14-C03; B14-E08; B14-E10; B14-E11

L4 ANSWER 5 OF 5 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 1996-477073 [47] WPIX

CR 1997-526401 [48]; 2001-217796 [22]; 2001-595776 [67]; 2003-787348 [74]; 2004-096715 [10]

DNC C1996-149012

TI Use of glucagon-like peptide-2 and analogues - for promoting growth and proliferation of gastrointestinal tissue, partic. for treating diseases.

DC

B04

IN

DRUCKER, D J; CRIVICI, A E; SUMNER-SMITH, M

PA

(ONEO-N) 1149336 ONTARIO INC; (ONEO-N) 114336 ONTARIO INC; (ALLX) ALLELIX BIOPHARMACEUTICALS INC

CYC 71

PI

WO 9632414 A1 19961017 (199647)\* EN 55 C07K014-605

RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD  
SE SZ UG

W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS  
JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT  
RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN

AU 9652658 A 19961030 (199708)

EP 830377 A1 19980325 (199816) EN

R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

US 5789379 A 19980804 (199838)

A61K038-00

US 5834428 A 19981110 (199901)

A61K038-00

JP 11505521 W 19990521 (199931)

53 C07K014-605

US 5990077 A 19991123 (200002)

A61K038-00

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MX 9707949 A1 19980601 (200009)

C07K014-605

AU 720493 B 20000601 (200035)

CN 1188485 A 19980722 (200270)

C07K014-605

ADT WO 9632414 A1 WO 1996-CA232 19960412; AU 9652658 A AU 1996-52658 19960412;

EP 830377 A1 EP 1996-908973 19960412; WO 1996-CA232 19960412; US 5789379 A

Cont of US 1995-422540 19950414, Cont of US 1996-631273 19960412,

Cont of US 1996-632533 19960412, US 1996-669791 19960628; US

5834428 A CIP of US 1995-422540 19950414, Cont of US

1996-632533 19960412, US 1996-669790 19960628; JP 11505521 W JP  
1996-530606 19960412, WO 1996-CA232 19960412; US 5990077 A US  
1995-422540 19950414; MX 9707949 A1 MX 1997-7949 19971014; AU 720493  
B AU 1996-52658 19960412; CN 1188485 A CN 1996-194693 19960412  
FDT AU 9652658 A Based on WO 9632414; EP 830377 A1 Based on WO 9632414; JP  
11505521 W Based on WO 9632414; AU 720493 B Previous Publ. AU 9652658,  
Based on WO 9632414  
PRAI US 1995-422540 19950414; US 1996-631273  
19960412; US 1996-632533 19960412; US  
1996-669791 19960628; US 1996-669790 19960628  
IC ICM A61K038-00; C07K014-605  
ICS A61K038-26; C07K005-00; C07K007-00; C07K017-00  
AB WO 9632414 A UPAB: 20040210  
Novel pharmaceutical compsn., comprises a glucagon like peptide-2 (GLP-2)  
selected from a vertebrate GLP-2, or an intestinotrophic analogue, which  
differs from a vertebrate GLP-2 in that it incorporates at least 1 amino  
acid addition, deletion or substitution, or an amino acid with an N- or  
C-terminal amino acid blocking gp., and a carrier.  
USE - The prods. and methods are used to promote the growth and  
proliferation of GI tissue. Specifically the compsn. can be used in the  
treatment of diabetes, or a GI disease, i.e. ulcers, digestion disorders,  
malabsorption syndromes, short-gut syndrome, cul-de-sac syndrome,  
inflammatory bowel disease, celiac sprue, tropical sprue,  
hyopgammaglobulinemic sprue, enteritis, regional enteritis (Crohn's  
diseases), small intestinal damage due to toxic or other chemotherapeutic  
agents or short bowel syndrome (claimed).  
Dwg.0/9  
FS CPI  
FA AB  
MC CPI: B04-C01; B04-N02; B14-E10; B14-N17B

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